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### Progress in Chronic Disease Prevention

#### **Chronic Disease Control Activities of Medical and Dental Organizations**

A meeting of representatives of selected medical and dental organizations was convened by the Clinical Services Branch, Office of Disease Prevention and Health Promotion, Public Health Service, U.S. Department of Health and Human Services, in September 1987 to discuss future directions for implementing preventive services in clinical settings.\* Organizations were asked to report on their current activities in disease prevention and health promotion. These reports indicate that organized medicine and dentistry are offering a variety of programs to prevent and control chronic diseases in the United States.

#### **Periodic Health Examinations**

Several organizations have issued recommendations on screening for reversible risk factors and early disease. The American Academy of Pediatrics (AAP) has published periodic updates of its recommendations for well-child care, *Guidelines for Health Supervision*. The American College of Obstetricians and Gynecologists (ACOG) has published "Technical Bulletins" on gynecologic cancer screening and, in cooperation with AAP, on perinatal care. The scientific basis for various components of periodic health examinations is being evaluated by the American College of Physicians (ACP) as part of its Clinical Efficacy Assessment Program. Other organizational programs have emphasized selected aspects of periodic health examinations. For example, the American Academy of Family Physicians (AAFP) cosponsors with the American Society of Gastrointestinal Endoscopists a training program on flexible sigmoidoscopy for family physicians. *The Journal of the American Medical*

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*Association (JAMA)* has published background papers and recommendations issued by the U.S. Preventive Services Task Force on components of the periodic health examination.

#### **Smoking Cessation**

AAFP has developed for its members a package of smoking cessation materials, the Stop Smoking Kit, which includes medical records forms, waiting room posters, and information on smoking cessation counseling techniques. AAFP has produced a self-help booklet and audiotape for patients who wish to quit smoking. The dangers of smoking in pregnancy have been emphasized by ACOG in *The Standards for Obstetric-Gynecologic Services* and in its Technical Bulletin entitled "Cigarette Smoking and Pregnancy." The Clinical Efficacy Assessment Program of ACP has evaluated office-based smoking cessation methods. The American Medical Association (AMA) has worked for the creation of smoke-free public environments, and the American Dental Association (ADA) has sponsored professional and public education on the use of smokeless tobacco. Smoking cessation techniques have also been taught in continuing medical education programs of the American Osteopathic Association (AOA).

#### **Injury Control**

The Injury Prevention Program of AAP provides pediatricians with safety surveys, information sheets, and other materials to inform parents about childhood injury prevention. The American College of Preventive Medicine (ACPM) has produced continuing education materials on the prevention of motor-vehicle trauma. An AMA monograph, *Medical Conditions Affecting Drivers*, and a *JAMA* review by AMA staff on medical standards for civilian pilots (1) both focus on the prevention of injuries. AMA has held several conferences on injury prevention since 1983.

#### **Immunizations**

The Report of the Committee on Infectious Diseases (popularly known as the "Red Book"), published by AAP, and the *Guide for Adult Immunization* ("Green Book"), published by ACP, offer recommendations on pediatric and adult immunizations, respectively. ACPM has been part of a national initiative to promote adult immunization and, in particular, reimbursement through Medicare for pneumococcal vaccine.

#### **Oral Health**

ADA promotes the use of dental sealants, fluoridation of water systems, the prevention of caries associated with nursing bottles (in collaboration with AAP), and the prevention of dental complications from medical illness, including human immunodeficiency virus infection.

#### **Other Areas**

ACOG has developed *Adolescent Sexuality: Guides for Professional Involvement*, a manual for physicians working with schools and public education programs on unwanted teenage pregnancy. ACOG has also prepared technical bulletins on the prevention of osteoporosis. Other educational programs include the National High Blood Pressure Education Program and the National Cholesterol Education Program.

#### **Implementation**

Medical and dental organizations have also taken steps to facilitate the implementation of clinical preventive services. These efforts include professional education, patient and public education, and public policy changes, as follows:

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**Professional education.** Education of health professionals at the undergraduate, graduate, and postgraduate levels is an important component of organizational initiatives in chronic disease prevention and control. AOA requires training in prevention beginning with the first year of undergraduate training and continuing through residency. AOA's continuing medical education courses have featured a number of prevention-related topics. Recent courses offered by AMA have included environmental risk assessment and the diagnosis and management of hyperlipidemia. ACPM cosponsors the PREVENTION conference series and also markets the "Dietary Inventory of Nutritional Experience," a computer software program that teaches physicians about nutrition and how to improve nutritional behavior. Both AAFP and AAP have organized numerous continuing medical education courses in prevention and regularly feature articles about health promotion and disease prevention in their respective journals, *American Family Physician* and *Pediatrics*.

**Patient and public education.** Many organizational chronic disease prevention and control projects include components on patient or public education. AAP's injury prevention program, for example, includes educational materials for patients. ACOG's efforts to prevent osteoporosis and unwanted teenage pregnancy include patient education pamphlets and television advertising. Patient education materials also have been produced by ACP, ADA, and AAFP.

**Public policy.** Numerous organizations have played an active role in advocating health-related changes in public policy. Child safety-seat laws were a focus of legislative action by AAP, and members of that association have testified before Congress on bills relevant to child health, have lobbied for improved access to health care for children, and have helped organize a child health advocacy coalition. ACOG has mounted policy initiatives on improved access to prenatal care and on contraceptive advertising. The expansion of community water fluoridation is a continuing concern of ADA. Several medical and dental organizations have worked together on various immunization policy questions.

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**Editorial Note:** The clinical setting offers an important opportunity for health professionals to provide services designed to control chronic disease (2). Clinicians, through their frequent contact with patients, have many opportunities to initiate disease prevention activities. In 1985, for example, the average American had contact with a physician 5.2 times (3). In addition to offering clinical preventive services such as screening tests, physicians can promote behavioral risk reduction through patient education and counseling (4). Clearly, the delivery of these preventive services during the clinical encounter serves an important public health role in the national strategy to prevent and control chronic disease (5,6).

At the same time, there are barriers to implementing preventive services in the clinical setting. There is evidence, for example, that physicians do not perform cancer screening and other preventive services in accordance with published recommendations (7,8). Despite these difficulties, however, physicians are beginning to adopt

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primary and secondary prevention as legitimate concerns (9) and appear to have a better understanding of how to change medical practices to comply with recommendations (10). This report suggests that, at the organizational level, physicians and dentists are developing programs for professional education and support, educational materials for patients, public education campaigns, and various policy initiatives to promote the implementation of disease prevention activities on a national scale.

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## Epidemiologic Notes and Reports

### **Organophosphate Toxicity Associated With Flea-Dip Products — California**

Flea-control products, particularly flea dips for pet animals, may contain potent cholinesterase-inhibiting organophosphate pesticides. In 1986 and 1987, two cases of human illness associated with the use of flea-dip products were reported to the California Department of Health Services (CDHS) and the California Department of Industrial Relations (CDIR). One patient was a pet groomer who requested advice from the state's Hazard Evaluation System and Information Service (HESIS). The other patient was also a pet groomer. She had had a long-term illness that was discovered by HESIS through a telephone survey.

#### **Case 1**

In early September 1986, a 33-year-old female pet groomer complained of periodic headache, nausea, dizziness, tiredness, and blurred vision and of sweating and feeling "confused" and "spaced out." For over a year, these episodes had occurred more frequently, and the symptoms had become more severe each time. According to her friends, her pupils were often pinpoint-sized during these episodes. At first, she thought her symptoms were due to stress at work, and she did not seek medical care.

For the preceding 18 months, she had been treating dogs with an organophosphate pesticide. During the summer months, she had treated an average of 10 dogs per day. The flea-dip product she used is a liquid concentrate containing 11.6% phosmet\* (a cholinesterase-inhibiting organophosphate insecticide known to cause acute irritation of the mouth, eyes, and skin) as the active ingredient. While diluting the concentrate in water, she frequently had spilled some of the concentrate on her skin.

After consulting with HESIS, the woman's physician diagnosed her illness as organophosphate intoxication. Her red cell cholinesterase activity (0.84 ΔpH) was well within the usual range (0.56–1.01 ΔpH) found by the testing laboratory. The woman was treated with oral atropine, and her symptoms diminished. For 2 weeks after returning to work, she avoided contact with flea-dip solutions and remained asymptomatic; however, within an hour after she treated a dog with a product containing chlorpyrifos,<sup>†</sup> a mild-to-moderate cholinesterase-inhibiting agent, her symptoms recurred. After that, she avoided contact with all organophosphate pesticides. Seven months later, her level of red cell cholinesterase, measured by the same laboratory, was within 20% (0.67 ΔpH) of the first value.

#### **Telephone Survey**

Later in September 1986, HESIS conducted a telephone survey. Twenty-four pet groomers in the San Francisco Bay area and Los Angeles were selected at random from listings in telephone directories. Through telephone interviews, 12 persons reported that they frequently used flea-dip products and usually had symptoms when they worked with the products. The symptoms most commonly reported were headache, dizziness, nausea, fatigue, and dermatitis. Two persons reported having symptoms of sweating, tearing, and confusion, all of which are consistent with cholinesterase inhibition. Flea-control products containing phosmet were most often

\*N-(Mercaptomethyl)phthalimide S-(O,O-dimethylphosphorodithioate).

<sup>†</sup>O,O-Diethyl O-(3,5,6-trichloro-2-pyridyl)-phosphorothioate.

*Toxicity – Continued*

reported as being related to the symptoms. One person complained of symptoms while working with a product containing chlorfenvinphos,<sup>5</sup> an organophosphate classified by the Environmental Protection Agency (EPA) as Toxicity Class I (1).<sup>†</sup>

Most of the pet groomers reported that they did not wear aprons or gloves and did not use the pesticides according to directions on the product labels. They often applied the undiluted concentrates with bare hands, and their skin and eyes were frequently exposed to the flea-control products.

<sup>5</sup>Chloro-1-(2,4-dichlorophenyl)-vinyl diethylphosphate.

<sup>†</sup>The most toxic chemicals are assigned to Class I.

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**TABLE I. Summary – cases of specified notifiable diseases, United States**

Disease	21st Week Ending			Cumulative, 21st Week Ending		
	May 28, 1988	May 30, 1987	Median 1983-1987	May 28, 1988	May 30, 1987	Median 1983-1987
Acquired Immunodeficiency Syndrome (AIDS)	679	U *	91	12,578	7,089	2,803
Aseptic meningitis	64	102	95	1,524	1,913	1,686
Encephalitis: Primary (arthropod-borne & unspec)	13	18	16	248	346	346
Post-infectious	1	5	4	36	38	44
Gonorrhea: Civilian	7,749	12,792	15,999	261,773	318,758	333,191
Military	104	251	406	4,809	6,823	8,318
Hepatitis: Type A	327	419	419	9,457	10,022	8,985
Type B	391	445	436	8,359	10,145	9,948
Non A, Non B	26	61	80	971	1,270	1,413
Unspecified	42	49	92	847	1,314	1,991
Legionellosis	13	14	14	301	344	258
Leprosy	1	5	5	72	84	109
Malaria	9	20	18	253	303	298
Measles: Total <sup>†</sup>	96	162	84	1,277	2,102	1,416
Indigenous	87	155	82	1,146	1,843	1,275
Imported	9	7	7	131	259	142
Meningococcal infections	37	65	50	1,443	1,500	1,393
Mumps	90	283	68	2,382	8,217	1,712
Pertussis	7	40	35	844	697	715
Rubella (German measles)	4	15	15	86	171	238
Syphilis (Primary & Secondary): Civilian	403	551	548	14,724	13,464	11,351
Military	1	-	6	76	72	86
Toxic Shock syndrome	6	6	7	119	128	160
Tuberculosis	289	319	444	7,530	8,020	8,102
Tularemia	9	3	7	45	47	47
Typhoid Fever	3	11	4	136	123	123
Typhus fever, tick-borne (RMSF)	17	16	13	68	63	91
Rabies, animal	174	141	116	1,701	2,070	2,070

**TABLE II. Notifiable diseases of low frequency, United States**

	Cum. 1988		Cum. 1988
Anthrax	-	Leptospirosis (Hawaii, 1)	12
Botulism: Foodborne	5	Plague	1
Infant	15	Poliomyelitis, Paralytic	-
Other	2	Psittacosis (Ohio, 1; Minn. 1)	30
Brucellosis	22	Rabies, human	-
Cholera	-	Tetanus	18
Congenital rubella syndrome	3	Trichinosis	8
Congenital syphilis, ages < 1 year	-		
Diphtheria	-		

\*Because AIDS cases are not received weekly from all reporting areas, comparison of weekly figures may be misleading.

<sup>†</sup>Nine of the 96 reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

**TABLE III. Cases of specified notifiable diseases, United States, weeks ending May 28, 1988 and May 30, 1987 (21st Week)**

Reporting Area	AIDS	Aseptic Menin- gitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel- losis	Leprosy
			Primary	Post-in- fectious			A	B	NA,NB	Unspeci- fied		
			Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988		
UNITED STATES	12,578	1,524	248	36	261,773	318,758	9,457	8,359	971	847	301	72
NEW ENGLAND	490	68	10	-	8,086	10,522	336	509	75	49	15	10
Maine	16	5	1	-	177	314	13	21	3	1	2	-
N.H.	14	10	-	-	117	179	26	32	4	3	1	-
Vt.	4	4	3	-	65	80	4	15	5	-	1	-
Mass.	264	29	5	-	2,906	3,908	173	325	51	40	9	9
R.I.	22	16	-	-	736	854	44	52	8	-	2	1
Conn.	170	4	1	-	4,085	5,187	76	64	4	5	-	-
MID. ATLANTIC	4,379	174	30	1	40,486	50,400	584	1,101	65	89	65	6
Upstate N.Y.	672	98	18	1	5,551	6,540	349	308	33	10	33	-
N.Y. City	2,373	29	7	-	17,125	26,601	114	505	6	61	11	5
N.J.	987	47	5	-	6,008	6,435	109	270	23	18	-	1
Pa.	347	-	-	-	10,824	12,824	12	18	3	-	21	-
E.N. CENTRAL	894	188	47	2	41,843	45,906	496	855	54	44	75	-
Ohio	182	79	20	2	9,941	9,794	143	230	16	7	28	-
Ind.	77	29	8	-	3,273	3,930	59	134	7	15	5	-
Ill.	400	6	-	-	12,087	13,712	64	70	-	4	-	-
Mich.	194	66	14	-	13,487	14,285	159	323	21	18	32	-
Wis.	41	8	5	-	3,055	4,185	71	98	10	-	10	-
W.N. CENTRAL	255	73	17	4	10,595	13,009	587	424	41	14	31	-
Minn.	52	15	2	1	1,456	2,047	31	62	5	3	1	-
Iowa	13	14	7	-	806	1,229	30	42	8	-	9	-
Mo.	132	22	1	-	5,986	6,629	338	252	20	6	4	-
N. Dak.	1	-	-	-	68	129	2	3	1	3	1	-
S. Dak.	3	5	-	1	202	250	-	1	2	-	10	-
Nebr.	16	3	2	2	635	796	18	19	-	-	4	-
Kans.	38	14	5	-	1,442	1,929	168	45	5	2	2	-
S. ATLANTIC	1,874	348	34	14	74,590	83,380	827	1,727	136	135	61	1
Del.	18	9	2	-	1,089	1,233	15	50	5	1	6	-
Md.	182	38	4	3	7,716	9,275	116	274	12	6	9	1
D.C.	206	8	-	1	5,250	5,659	8	21	3	1	-	-
Va.	146	41	14	2	5,334	6,226	161	113	31	93	6	-
W. Va.	6	7	1	-	554	617	9	27	2	3	-	-
N.C.	127	60	10	-	12,338	12,591	156	316	32	-	19	-
S.C.	73	5	-	1	5,595	6,822	26	239	6	3	10	-
Ga.	314	40	1	-	14,936	14,349	155	267	7	3	6	-
Fla.	802	140	2	7	21,778	26,608	181	420	38	25	5	-
E.S. CENTRAL	352	111	22	5	20,535	23,426	364	538	69	6	9	1
Ky.	42	35	6	1	1,977	2,394	320	99	30	2	4	-
Tenn.	175	11	6	-	6,786	8,157	25	271	18	-	2	-
Ala.	82	52	10	2	6,675	7,513	7	134	16	4	2	1
Miss.	53	13	-	2	5,097	5,362	12	34	5	-	1	-
W.S. CENTRAL	1,105	159	18	-	29,157	36,372	966	635	78	209	9	13
Ark.	39	3	2	-	2,757	3,556	120	36	1	4	2	-
La.	165	29	3	-	6,228	6,623	57	144	12	9	3	-
Okla.	68	15	4	-	2,587	3,957	220	70	19	17	4	-
Tex.	833	112	9	-	17,585	22,236	569	385	46	179	-	13
MOUNTAIN	395	67	19	1	5,724	8,518	1,409	685	106	85	15	-
Mont.	8	2	-	-	178	207	21	24	6	3	-	-
Idaho	3	1	-	-	173	308	62	44	2	1	-	-
Wyo.	1	1	-	-	91	168	1	5	3	-	1	-
Colo.	149	23	3	-	1,305	1,837	96	90	19	38	4	-
N. Mex.	22	4	2	-	545	913	247	91	7	1	-	-
Ariz.	129	19	5	-	2,008	2,998	717	273	39	25	7	-
Utah	33	10	4	1	244	267	167	63	22	13	2	-
Nev.	50	7	5	-	1,180	1,820	98	95	8	4	1	-
PACIFIC	2,834	336	51	9	30,757	47,225	3,888	1,885	347	216	21	41
Wash.	175	-	3	4	2,384	3,487	888	278	66	21	6	2
Oreg.	83	-	-	-	1,228	1,778	672	260	37	11	-	1
Calif.	2,528	294	45	5	26,429	40,810	2,202	1,298	240	178	13	34
Alaska	10	7	2	-	429	746	122	29	3	3	-	1
Hawaii	38	35	1	-	287	404	4	20	1	3	2	3
Guam	-	-	-	-	56	79	3	3	-	2	1	3
P.R.	625	13	2	-	587	909	14	106	20	20	-	-
V.I.	9	-	-	-	152	103	1	3	2	-	-	-
Amer. Samoa	-	-	-	-	23	38	-	1	-	-	-	-
C.N.M.I.	-	-	-	-	19	-	1	2	-	4	-	-

N: Not notifiable

U: Unavailable

C.N.M.I.: Commonwealth of the Northern Mariana Islands

**TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending May 28, 1988 and May 30, 1987 (21st Week)**

Reporting Area	Malaria		Measles (Rubeola)				Meningococcal Infections	Mumps		Pertussis			Rubella		
	Cum. 1988	1988	Indigenous		Imported*	Total		Cum. 1988	1988	Cum. 1988	1988	Cum. 1988	Cum. 1987	1988	Cum. 1988
			1988	Cum. 1988	1988		Cum. 1988								
UNITED STATES	253	87	1,146	9	131	2,102	1,443	90	2,382	7	844	697	4	86	171
NEW ENGLAND	23	-	19	-	46	180	117	7	38	-	78	18	-	1	1
Maine	2	-	-	-	-	3	3	-	-	-	11	1	-	-	1
N.H.	-	-	13	-	44	141	14	7	34	-	22	2	-	-	-
Vt.	-	-	-	-	-	15	6	-	1	-	2	3	-	-	-
Mass.	16	-	1	-	-	5	49	-	3	-	33	4	-	-	-
R.I.	3	-	-	-	-	1	19	-	-	-	1	-	-	1	-
Conn.	2	-	5	-	2	15	26	-	-	-	9	8	-	-	-
MID. ATLANTIC	32	79	407	9	23	392	141	2	208	-	36	96	-	8	7
Upstate N.Y.	15	-	4	-	2	19	69	2	42	-	21	74	-	1	5
N.Y. City	10	-	24	-	1	327	26	-	75	-	1	-	-	5	1
N.J.	5	-	2	-	11	9	45	-	25	-	4	5	-	1	1
Pa.	2	79	377	9†	9	37	1	-	66	-	10	17	-	1	-
E.N. CENTRAL	11	5	76	-	17	267	159	5	527	2	97	88	-	21	20
Ohio	2	-	2	-	4	5	64	-	68	-	21	26	-	-	-
Ind.	-	-	19	-	-	-	18	-	42	-	50	1	-	-	-
Ill.	-	5	42	-	9	100	6	1	193	-	2	5	-	17	18
Mich.	8	-	13	-	4	27	49	4	151	2	18	25	-	4	2
Wis.	1	-	-	-	-	135	22	-	73	-	6	31	-	-	-
W.N. CENTRAL	8	-	20	-	-	127	58	3	109	1	38	39	-	-	1
Minn.	4	-	20	-	-	18	14	-	-	-	7	8	-	-	-
Iowa	-	-	-	-	-	-	-	3	29	-	14	6	-	-	1
Mo.	3	-	-	-	-	107	21	-	27	1	6	13	-	-	-
N. Dak.	-	-	-	-	-	1	-	-	-	-	6	2	-	-	-
S. Dak.	-	-	-	-	-	-	2	-	-	-	2	2	-	-	-
Nebr.	-	-	-	-	-	-	6	-	11	-	-	-	-	-	-
Kans.	1	-	-	-	-	1	15	-	42	-	3	8	-	-	-
S. ATLANTIC	38	3	226	-	11	53	255	52	329	-	80	141	-	3	12
Del.	-	-	-	-	-	4	1	-	-	-	3	-	-	-	2
Md.	3	3	5	-	2	-	23	34	55	-	17	3	-	-	2
D.C.	5	-	-	-	-	1	7	17	118	-	-	-	-	-	-
Va.	8	-	129	-	2	-	30	-	81	-	7	34	-	-	1
W. Va.	-	-	6	-	-	-	2	-	6	-	-	22	-	-	-
N.C.	8	-	-	-	1	2	44	1	28	-	25	59	-	-	-
S.C.	3	-	-	-	-	-	30	-	4	-	-	-	-	-	-
Ga.	3	-	-	-	-	-	38	-	19	-	17	17	-	-	1
Fla.	8	-	86	-	6	46	80	-	18	-	11	6	-	3	6
E.S. CENTRAL	4	-	42	-	-	2	144	2	324	1	13	10	-	-	2
Ky.	-	-	32	-	-	-	28	-	140	-	-	1	-	-	2
Tenn.	-	-	-	-	-	-	88	2	175	-	8	2	-	-	-
Ala.	3	-	-	-	-	-	19	-	6	1	4	5	-	-	-
Miss.	1	-	10	-	-	2	9	N	N	-	1	2	-	-	-
W.S. CENTRAL	24	-	9	-	-	172	92	11	453	-	63	43	-	7	5
Ark.	-	-	-	-	-	-	11	-	78	-	5	2	-	3	2
La.	3	-	-	-	-	-	29	9	159	-	7	10	-	-	-
Okla.	6	-	8	-	-	1	8	1	116	-	24	31	-	1	-
Tex.	15	-	1	-	-	171	44	1	100	-	27	-	-	3	3
MOUNTAIN	13	-	116	-	2	372	42	7	126	-	300	70	-	4	15
Mont.	1	-	-	-	-	69	-	-	2	-	1	3	-	-	-
Idaho	-	-	-	-	1	-	4	-	1	-	237	27	-	-	1
Wyo.	-	-	-	-	-	2	-	-	2	-	1	2	-	-	1
Colo.	7	-	116	-	1	5	10	1	25	-	9	17	-	2	-
N. Mex.	1	-	-	-	-	291	10	N	N	-	1	3	-	-	-
Ariz.	2	-	-	-	-	4	10	6	84	-	31	17	-	-	4
Utah	1	-	-	-	-	-	7	-	3	-	19	1	-	1	9
Nev.	1	-	-	-	-	1	1	-	9	-	1	-	-	1	-
PACIFIC	100	-	231	-	32	537	435	1	268	3	139	192	4	42	108
Wash.	8	-	1	-	-	1	37	-	14	2	32	27	-	-	-
Oreg.	6	-	1	-	-	35	23	N	N	1	4	14	-	-	1
Calif.	84	-	228	-	29	497	357	-	245	-	81	78	-	34	75
Alaska	2	-	-	-	-	-	5	-	5	-	3	3	-	-	-
Hawaii	-	-	1	-	3	4	13	1	4	-	19	70	4	8	32
Guam	-	-	-	-	1	2	-	-	2	-	-	-	-	1	1
P.R.	1	-	159	-	-	407	6	-	5	-	6	12	-	1	2
V.I.	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-

\*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International ‡Out-of-state

**TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending May 28, 1988 and May 30, 1987 (21st Week)**

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988
UNITED STATES	14,724	13,464	119	7,530	8,020	45	136	68	1,701
NEW ENGLAND	399	208	11	153	259	1	10	-	3
Maine	5	1	2	3	15	-	-	-	1
N.H.	4	2	3	-	5	-	-	-	2
Vt.	1	1	2	1	4	-	-	-	-
Mass.	168	103	4	96	142	1	7	-	-
R.I.	13	5	-	11	23	-	-	-	-
Conn.	208	96	-	42	70	-	3	-	-
MID. ATLANTIC	3,037	2,433	19	1,363	1,430	-	21	2	161
Upstate N.Y.	210	90	9	228	225	-	4	1	1
N.Y. City	1,931	1,709	2	628	695	-	8	1	-
N.J.	344	268	3	240	248	-	9	-	-
Pa.	552	366	5	267	262	-	-	-	160
E.N. CENTRAL	478	396	18	865	927	1	14	1	39
Ohio	46	48	14	158	182	-	4	1	-
Ind.	21	27	-	86	101	-	2	-	10
Ill.	240	212	-	347	366	-	6	-	6
Mich.	157	75	4	222	242	1	1	-	5
Wis.	15	34	-	52	36	-	1	-	18
W.N. CENTRAL	95	58	14	201	227	20	4	10	193
Minn.	8	6	1	33	60	-	2	-	69
Iowa	10	9	2	15	10	-	-	-	13
Mo.	52	27	6	104	118	15	2	7	5
N. Dak.	1	-	-	3	3	-	-	-	36
S. Dak.	5	5	1	17	9	2	-	1	54
Nebr.	13	7	2	7	11	2	-	-	6
Kans.	6	4	2	22	16	1	-	2	10
S. ATLANTIC	5,208	4,566	10	1,702	1,613	4	16	23	661
Del.	55	38	1	17	18	1	-	-	19
Md.	299	240	1	184	137	-	1	4	261
D.C.	237	135	-	76	49	-	-	-	4
Va.	172	108	-	184	159	2	7	3	177
W. Va.	5	5	-	34	48	-	-	1	42
N.C.	314	253	5	127	157	-	1	11	-
S.C.	236	296	-	173	145	-	-	3	29
Ga.	871	643	-	262	248	1	2	1	92
Fla.	3,019	2,848	3	645	652	-	5	-	37
E.S. CENTRAL	837	816	12	633	688	4	2	8	120
Ky.	28	6	5	171	165	3	1	1	56
Tenn.	364	353	4	183	219	-	-	5	32
Ala.	238	203	3	198	211	-	1	2	32
Miss.	207	254	-	81	93	1	-	-	-
W.S. CENTRAL	1,580	1,714	12	937	910	11	6	19	240
Ark.	86	83	-	98	96	5	-	1	40
La.	321	300	-	150	104	-	2	-	-
Okla.	63	74	4	89	88	6	-	15	18
Tex.	1,110	1,257	8	600	622	-	4	3	182
MOUNTAIN	293	303	13	176	235	4	6	4	133
Mont.	2	8	-	-	8	-	1	3	104
Idaho	-	3	2	2	16	-	-	1	-
Wyo.	1	1	-	1	1	-	-	-	12
Colo.	38	44	2	15	47	3	3	-	2
N. Mex.	22	29	-	38	39	1	1	-	4
Ariz.	74	143	5	97	108	-	1	-	10
Utah	9	11	4	-	6	-	-	-	1
Nev.	147	64	-	23	10	-	-	-	-
PACIFIC	2,797	2,970	10	1,500	1,731	-	57	1	151
Wash.	73	60	2	93	91	-	3	-	-
Oreg.	115	101	-	53	49	-	5	-	-
Calif.	2,586	2,801	8	1,275	1,480	-	47	1	145
Alaska	6	2	-	16	30	-	-	-	6
Hawaii	17	6	-	63	81	-	2	-	-
Guam	1	2	-	7	4	-	-	-	-
P.R.	257	409	-	86	113	-	2	-	29
V.I.	1	3	-	3	2	-	-	-	-
Amer. Samoa	-	2	-	-	-	-	-	-	-
C.N.M.I.	1	-	-	8	-	-	-	-	-

U: Unavailable

**TABLE IV. Deaths in 121 U.S. cities,\* week ending May 28, 1988 (21st Week)**

Reporting Area	All Causes, By Age (Years)						P&I** Total	Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1			All Ages	≥65	45-64	25-44	1-24	<1	
<b>NEW ENGLAND</b>	693	469	122	57	17	28	50	<b>S. ATLANTIC</b>	1,162	647	247	186	32	47	59
Boston, Mass.	165	95	30	20	8	12	18	Atlanta, Ga.	142	84	36	13	5	4	5
Bridgeport, Conn.	32	22	5	4	-	1	-	Baltimore, Md.	132	73	33	20	3	3	8
Cambridge, Mass.	33	27	6	-	-	-	-	Charlotte, N.C.	54	28	13	5	4	3	2
Fall River, Mass.	38	30	6	-	1	1	2	Jacksonville, Fla.	110	71	21	10	4	4	2
Hartford, Conn.	75	46	17	5	-	7	3	Miami, Fla.	107	68	21	11	4	3	-
Lowell, Mass.	31	20	7	4	-	-	2	Norfolk, Va.	70	42	13	8	1	6	2
Lynn, Mass.	21	15	5	1	-	-	-	Richmond, Va.	90	57	21	10	1	1	12
New Bedford, Mass.	34	24	2	7	1	-	1	Savannah, Ga.	30	19	7	2	-	2	5
New Haven, Conn.	54	35	11	5	1	2	7	St. Petersburg, Fla.	91	66	16	4	1	4	2
Providence, R.I.	57	43	8	2	2	2	3	Tampa, Fla.	75	44	15	10	1	3	6
Somerville, Mass.	9	7	2	-	-	-	-	Washington, D.C.	236	74	48	93	7	14	14
Springfield, Mass.	49	32	10	3	4	-	-	Wilmington, Del.	25	21	3	-	1	-	1
Waterbury, Conn.	35	28	5	2	-	-	7	<b>E.S. CENTRAL</b>	788	536	162	58	22	10	34
Worcester, Mass.	60	45	8	4	-	3	3	Birmingham, Ala.	140	89	34	12	3	2	-
<b>MID. ATLANTIC</b>	2,534	1,684	500	244	55	49	145	Chattanooga, Tenn.	50	31	14	4	1	-	2
Albany, N.Y.	44	34	7	1	2	-	3	Knoxville, Tenn.	71	55	10	2	4	-	5
Allentown, Pa.	15	10	4	1	-	-	-	Louisville, Ky.	94	59	24	8	2	1	3
Buffalo, N.Y.	57	37	11	6	1	-	8	Memphis, Tenn.	203	137	39	17	8	2	10
Camden, N.J.	43	29	7	1	5	1	1	Mobile, Ala.	69	51	10	7	-	1	3
Elizabeth, N.J.	29	17	7	4	1	-	4	Montgomery, Ala.	38	26	6	2	1	3	4
Erie, Pa.†	37	24	8	3	-	2	4	Nashville, Tenn.	123	88	25	6	3	1	7
Jersey City, N.J.	22	13	7	2	-	-	-	<b>W.S. CENTRAL</b>	1,238	764	273	121	39	40	44
N.Y. City, N.Y.	1,372	868	282	168	32	22	65	Austin, Tex.	44	28	10	5	-	1	1
Newark, N.J.	51	26	16	10	3	2	4	Baton Rouge, La.	34	26	5	2	1	-	1
Paterson, N.J.	37	16	8	4	1	2	1	Corpus Christi, Tex.	38	27	8	1	1	1	1
Philadelphia, Pa.	399	283	69	29	6	12	18	Dallas, Tex.	187	95	42	30	9	11	3
Pittsburgh, Pa.†	62	45	14	1	1	1	7	El Paso, Tex.	46	30	7	6	-	3	3
Reading, Pa.	38	31	4	3	-	-	-	Fort Worth, Tex.	97	66	18	8	2	3	4
Rochester, N.Y.	104	80	15	4	1	4	14	Houston, Tex.‡	308	176	74	34	13	11	7
Schenectady, N.Y.	27	21	4	1	-	1	3	Little Rock, Ark.	74	40	22	5	2	4	2
Scranton, Pa.†	35	26	9	-	-	-	3	New Orleans, La.	118	79	20	14	5	-	-
Syracuse, N.Y.	77	63	13	1	-	-	2	San Antonio, Tex.	187	120	45	15	3	4	15
Trenton, N.J.	37	25	9	2	1	-	1	Shreveport, La.	47	33	12	-	2	-	5
Utica, N.Y.	23	16	4	1	1	1	3	Tulsa, Okla.	58	44	10	1	1	2	2
Yonkers, N.Y.	25	20	2	2	-	1	2	<b>MOUNTAIN</b>	690	445	138	59	31	16	34
<b>E.N. CENTRAL</b>	2,329	1,513	487	171	72	86	87	Albuquerque, N. Mex.	81	51	22	5	2	1	4
Akron, Ohio	62	49	8	4	-	1	1	Colo. Springs, Colo.	48	35	10	-	2	1	7
Canton, Ohio	38	29	8	-	-	1	2	Denver, Colo.	91	61	18	7	2	3	7
Chicago, Ill.§	564	362	125	45	10	22	16	Las Vegas, Nev.	113	58	30	15	8	1	5
Cincinnati, Ohio	140	88	26	14	8	4	11	Ogden, Utah	30	20	4	1	5	-	1
Cleveland, Ohio	135	82	32	13	3	5	1	Phoenix, Ariz.	131	78	26	17	4	6	2
Columbus, Ohio	165	95	35	26	7	2	2	Pueblo, Colo.	20	14	3	2	1	-	1
Dayton, Ohio	106	74	26	1	2	3	1	Salt Lake City, Utah	55	33	9	6	5	2	2
Detroit, Mich.	272	167	58	26	10	11	3	Tucson, Ariz.	121	95	16	6	2	2	5
Evansville, Ind.	56	35	15	1	2	3	2	<b>PACIFIC</b>	1,894	1,254	333	192	53	53	132
Fort Wayne, Ind.	67	49	9	3	4	2	4	Berkeley, Calif.	18	14	-	3	1	-	-
Gary, Ind.	17	7	6	2	2	-	2	Fresno, Calif.	56	43	3	3	2	4	8
Grand Rapids, Mich.	69	47	11	4	3	4	11	Glendale, Calif.§	23	20	2	1	-	-	1
Indianapolis, Ind.	179	113	34	9	11	12	7	Honolulu, Hawaii	59	40	9	8	1	1	10
Madison, Wis.	43	29	9	3	1	1	4	Long Beach, Calif.	75	47	15	5	1	7	9
Milwaukee, Wis.	138	97	33	2	2	4	6	Los Angeles Calif.§	515	320	106	60	17	5	19
Peoria, Ill.	50	31	10	2	1	6	3	Oakland, Calif.	79	48	18	6	4	3	4
Rockford, Ill.	50	37	7	2	2	2	6	Pasadena, Calif.§	33	27	4	1	-	1	2
South Bend, Ind.	41	31	6	4	-	-	1	Portland, Oreg.	127	88	20	13	3	3	5
Toledo, Ohio	91	60	16	9	3	3	4	Sacramento, Calif.	147	98	28	14	2	4	18
Youngstown, Ohio	46	31	13	1	1	-	1	San Diego, Calif.	128	83	18	15	7	5	9
<b>W.N. CENTRAL</b>	787	552	152	46	15	22	48	San Francisco, Calif.	165	95	28	31	5	6	5
Des Moines, Iowa	81	61	13	3	2	2	4	San Jose, Calif.	193	135	33	15	5	6	21
Duluth, Minn.	22	15	4	1	-	2	-	Seattle, Wash.	138	98	25	9	4	2	8
Kansas City, Kans.	34	20	9	3	1	1	1	Spokane, Wash.	62	46	13	1	-	2	8
Kansas City, Mo.	110	69	28	10	1	2	14	Tacoma, Wash.	76	52	11	7	1	5	5
Lincoln, Nebr.	32	22	7	2	-	1	2	<b>TOTAL</b>	12,115 <sup>††</sup>	7,864	2,414	1,134	336	351	633
Minneapolis, Minn.	160	113	31	10	2	4	14								
Omaha, Nebr.	83	63	12	3	1	4	4								
St. Louis, Mo.	141	100	25	11	2	3	2								
St. Paul, Minn.	67	50	12	2	1	2	1								
Wichita, Kans.	57	39	11	1	5	1	6								

\*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

\*\*Pneumonia and influenza.

†Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past available 4 weeks.

*Toxicity – Continued***Case 2**

One of the persons interviewed was a 43-year-old female dog groomer who had been treating 8–12 dogs each day for 3 years. She sponged a concentrated solution of flea-dip product directly onto flea-infested areas on the dogs. For a year, she had had periodic dizziness, fatigue, blackouts, blurred vision, chest pain, sweating, coldness, and chills. During these episodes, she had pinpoint-sized pupils. Because of the blackouts, her physician referred her to a neurologist, who observed that she had unequal pupils during one of these episodes. Diagnostic tests—including an electroencephalogram and a brain scan—did not reveal the cause of her symptoms. Pesticide poisoning was not suspected until HESIS referred her to a physician specializing in occupational medicine. Three months later, after she had completely avoided all exposure to the products, her red blood cell cholinesterase levels had gradually increased by more than 30%. The majority of her symptoms also resolved during this period. On the basis of this finding, her illness was diagnosed as organophosphate pesticide poisoning (2).

**Further Investigations**

CDHS is now conducting a statewide investigation of pet groomers and other animal handlers. The California Department of Food and Agriculture is evaluating the hazards, use, and labeling of all flea-control products containing phosmet.

*Reported by: J Rosenberg, MD, SG Quenon, RN, Hazard Evaluation System and Information Svcs, California Dept of Health Svcs/Dept of Industrial Relations. Surveillance and Programs Br, Div of Environmental Hazards and Health Effects, Center for Environmental Health and Injury Control, CDC.*

**Editorial Note:** HESIS, which was established in 1977 and is jointly supported by CDHS and CDIR, provides an “early warning system” for identifying occupational diseases and hazards. Since 1980, HESIS has assessed occupational hazards, provided health information to the public, and maintained surveillance for occupational illness and exposure. In 1986, HESIS responded to 2,429 inquiries.

EPA has assigned phosmet to Toxicity Class II because of acute oral toxicity ( $LD_{50} = 147 \text{ mg/kg}$ ) (1). In a recent review of registration data on pesticides, investigators found a lack of information on acute inhalation toxicity, subchronic dermal toxicity, mutagenicity, oncogenicity, and the general metabolism of phosmet (3). The low-level, acute dermal toxicity ( $LD_{50} = 3,160 \text{ mg/kg}$ ) suggests a low rate of dermal absorption, but quantitative data on dermal absorption—particularly of flea-dip formulations—are lacking.

EPA requires that products used as flea dips for dogs and cats must have labels cautioning the users to wear long-sleeved shirts, long pants, elbow-length waterproof gloves, waterproof aprons, and unlined waterproof boots. Because animals that have been dipped or sprayed with pesticides have become ill or have died, EPA now requires that the product label state that a dog or cat may be poisoned if the product is not properly diluted before use.

The extent to which animal handlers in the United States are exposed to or become ill from flea-control pesticides is unknown. Animal groomers and handlers should follow label directions precisely and should wear gloves and protective clothing as recommended.

**References**

1. Sine C. Farm chemicals handbook '87. Willoughby, Ohio: Meister Publishing, 1987.
2. Coye MJ, Lowe JA, Maddy KT. Biological monitoring of agricultural workers exposed to pesticides: I. Cholinesterase activity determinations. *J Occup Med* 1986;28:619–27.

*Toxicity – Continued*

3. Environmental Protection Agency. Guidance for the reregistration of pesticide products containing phosmet as the active ingredient. Washington, DC: US Environmental Protection Agency, Office of Pesticide Programs, 1986; EPA report no. EPA-540-RS-87-107.

Notices to Readers**Announcement of the Third National Conference on  
Chronic Disease Prevention and Control**

CDC and the Association of State and Territorial Health Officials (ASTHO) will cosponsor the Third National Conference on Chronic Disease Prevention and Control, *Putting Science Into Practice*, October 19–21, 1988, at the Hyatt Regency Denver, in Denver, Colorado. The conference is open to the public; there will be no registration fee.

The conference will build on the strategies identified by participants at the First and Second National Conferences on Chronic Disease Prevention and Control. Those two conferences placed particular emphasis on the interactions among federal, state, and local health departments; voluntary health agencies; professional organizations; and others.

This year's conference will include the following plenary sessions:

- Health Education/Mass Media Approaches for Changing Behaviors
- Preventive Health Services in Primary Care Settings (including the cost-effectiveness of chronic disease prevention and control strategies)
- Long-Term/Broad Strategic Issues for Public Health Chronic Disease Control

Concurrent afternoon sessions will focus on breast cancer, cervical cancer, cholesterol/cardiovascular disease, diabetes, and smoking.

Additional information may be obtained by contacting Martha S. Brocato, Division of Chronic Disease Control, Center for Environmental Health and Injury Control, Centers for Disease Control (F10), Atlanta, Georgia 30333; telephone: (404) 488-4251 or FTS 236-4251.

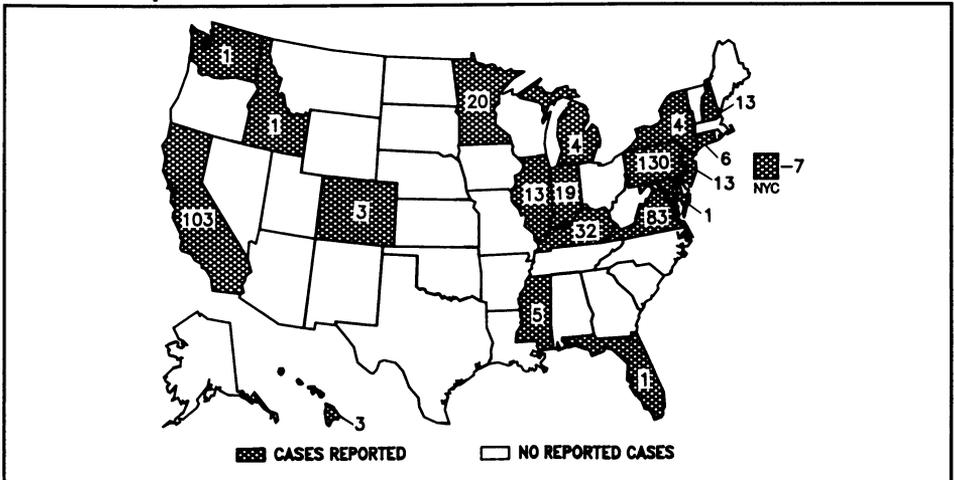
**Malaria Prevention Information System**

Information on prevention of malaria for travelers is now available 24 hours a day by calling (404) 639-1610. The information system, which is a CDC pilot project, gives general information about malaria and malaria prevention and detailed recommendations on malaria prevention in specific geographic areas (Africa, the Indian subcontinent, Mexico, Central America and the Caribbean, South America, China and Southeast Asia, and Oceania). Information on prevention of malaria in children and pregnant or breastfeeding women is also available. Callers can select any one or all of the informational messages and should be prepared to write down the names and dosages of drugs. The information will be updated as needed.

## Erratum: Vol. 36, No. 6

p. 89–90 In the article entitled “PCB Contamination of Ceiling Tiles in Public Buildings – New Jersey,” the second sentence of the third paragraph states: “In February 1986, a consultant hired by the college pursued the secretary’s observation and evaluated ceiling tiles throughout the school.” The sentence should read: “A consultant was hired by the college in January 1986, and the consultant’s sampling and analysis of the ceiling tiles was under way at the time of the secretary’s observation. The observations of both the secretary and the consultant occurred simultaneously and independently of each other.”

FIGURE I. Reported measles cases – United States, Weeks 17–20, 1988



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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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